GAMING MACHINE

Background of the Invention

The present invention relates to gaming machine. The invention has been developed primarily for computerized gaming machines such as stand alone "poker machines" or Internet facilitated gaming. In light of the prevalence of these forms of gaming, the invention will be described herein with reference to that application. However, the invention is not limited to this and may be suitable for many other applications.

Gaming machines have long been known and are now one of the most common forms of gambling. Usually gaming machines will simulate a well-known game of chance. One of the oldest and best known forms of gaming machine is the rotating reel type "poker machine". Poker machines use a series of three, four or five reels, each reel having symbols on its peripheral edge. The reels are rotated upon the placement of a bet and then stopped to produce an array of randomly arranged symbols. Winnings are paid if the random arrangement of symbols matches one of the predetermined winning combinations.

Gaming machines can "pay winnings" in a variety of ways. These include dispensing money, dispensing tokens that can be redeemed for money, or simply adding credits to a credit meter that can be used for placing future bets or redeemed as money. More recently these gaming machines have been computerized in the form of stand alone machines or simulations of the stand alone machines accessible via the Internet. Computerized machines usually award winnings in the form of credits tallied on a credit meter. In light of their wide spread use, the invention will be described in the context of this type of winnings payment mechanism.

However those skilled in the art will readily understand that the term encompasses other many payment mechanisms.

More recently, these gaming machines have been computerized with a video screen replacing the physically rotating reels. Typically, the display screen presents an array of symbols in five columns and three rows equating to the symbols that would normally be seen on the five physically rotating reels of an old style mechanical machine. Upon the placement of a wager, the five columns of symbols move downwardly across the display screen and then stop in order to simulate a series of spinning reels.

Computerized gaming machines use a video screen display instead of physically rotating reels. The display typically presents an array of symbols in five columns and three rows equating to the symbols that would normally be seen on the five physically rotating reels of an old style mechanical machine. Computerized machines have allowed players to simultaneously bet on the combination of symbols appearing in many different part of the array. These parts of the array are often referred to as "paylines" consisting of lines of adjacent symbols extending through the array. The symbols may be laterally adjacent each other (as in from the same row) or diagonally adjacent each other. They usually extend along each row as well as various angled or "zigzag" lines through the array. This provides a more interesting and exciting game than the old style mechanical machines which traditionally only offered a single payline through the middle row.

A common feature on gaming machines of this type is the use of "wildcards". Wildcards are well known in many card games as cards that have been designated as substitutes for other cards. Similarly, wildcard symbols appearing in the array of symbols on a gaming machine can substitute for other symbols.

The appearance of a wildcard on any paylines carrying a bet is beneficial as it increases the probability of forming a winning combination. Wildcards can also provide an incentive for players to place bets on most, if not all the available paylines. Each symbol in the array will usually be part of more than one payline. Therefore, the probability of a winning payline (that is, a payline which carries a bet and shows a winning combination of symbols) is significantly increased if one or more wildcards appear in an array in which the player has bet on all available paylines.

Seasoned players are now very familiar with these aspects of computerized 'spinning reel' type poker machines. In an effort to maintain player interest, game designers constantly need to incorporate fresh features and operating modes. However, despite this the fundamental operating principles discussed above remain the same.

Summary of the Invention

In accordance with the present invention, there is provided a gaming machine which overcomes or ameliorates at least one of the disadvantages of prior gaming and provides a useful alternative.

Further, in accordance with the present invention, there is provided a gaming machine comprising:

means adapted to display an array of symbols selected randomly from a set of symbols; and

means adapted to pay winnings on any predetermined winning combinations appearing in a portion of the array carrying a bet;

wherein the randomly selected symbols are divided into groups of at least one symbol such that the groups are sequentially positioned to complete the array.

Still further in accordance with the present invention, there is provided a method for operating a gaming comprising:

displaying an array of symbols selected randomly from a set of symbols; and

paying winnings on any predetermined winning combinations appearing in a portion of the array carrying a bet;

wherein the randomly selected symbols are divided into groups of at least one symbol such that the groups are sequentially positioned to complete the array.

Preferably, the groups have at least two adjacent symbols. In a further preferred form, the number and configuration of the symbols in each of the groups is randomly selected and the groups are sequentially positioned in the incomplete array until it is mostly complete, whereafter wildcard symbols are positioned in the remaining positions to complete the array.

Of course, at least two of the groups may be positioned in the array simultaneously as long as the construction at the array occurs sequentially in the sense of a staged appearance of the symbols. One skilled in the art will appreciate that the use of the term 'sequentially' throughout the specification encompasses the positioning of the groups in pairs or otherwise.

In a particularly preferred form, at least one position in the array is designated as having an associated bonus wherein the associated bonus is awarded if any winning combinations include a symbol situated on any of the designated positions. The bonus is associated with each of the designated positions include at least one of: a set number of extra credits to be added to the winnings normally awarded for the winning combination covering the designated position; doubling, tripling or otherwise multiplying the winnings normally awarded for the winning

combination covering the designated position; and a set number of free games whereby the machine operates without requiring the placement of a wager.

In still further preferred forms, at least one of the groups consists entirely of wildcards. In these embodiments of the invention, the volatility of the game is increased if the wildcards multiply winnings associated with any of the winning combinations in which they appear by a factor greater than one.

The volatility of a gaming machine is a reference to the average amount of any winnings paid by the machine and the frequency that winning combinations appear in the array. All gaming machines must over time, return a percentage of all bets received as winnings. This percentage is usually set by government regulation. A high volatility gaming machine will return this percentage of the bets through relatively fewer wins of greater average amounts and conversely a low volatility gaming machine will return the set percentage of bets through a higher frequency of lower value wins.

For added visual interest, the symbols are displayed on simulated three dimensional objects. In one embodiment, the three dimensional objects are rectangular prisms with symbols shown on every face.

In some forms, the groups simply appear in the array or they form above the array and drop down into their intended positions within array. The latter situation provides an extra degree of uncertainty and anticipation in the player as the player will not know where a group will be positioned in the array until it has stopped moving down the screen. In this way, if the player sees that the partially complete array has some of the symbols required for a valuable winning combination and the next group of symbols dropping into position contains some or all

of the remaining symbols required for the winning combination, a sense of excitement builds until the group is finally positioned within the array.

From the foregoing, it can be seen that gaming machines according to the present invention offer a significant departure from conventional gaming machines which form the random arrangement of symbols through a video simulation of adjacent spinning reels being brought to a halt. By creating the array in stages using a series of groups of symbols, this offers the player greater visual interest and provides a basis to raise the level of excitement and anticipation as the array is 'constructed'.

Brief Description of the Drawings

Preferred embodiments of the present invention will now be described by way of example only with reference to the accompanying drawings, in which:

Figure 1 shows examples of the configuration of groups of symbols for use in a gaming machine according to the present invention;

Figure 2 shows the vacant array positions into which the groups of symbols are positioned;

Figure 3 shows an example of groups combining to complete an array of symbols according to the present invention;

Figure 4 shows a group consisting entirely of wildcard symbols; and

Figure 5 shows a vacant array with certain designated array positions having associated bonuses.

Detailed Description of the Invention

Referring to Figures 1 and 2, schematic representations of the groups of symbols and partially complete array are shown. The partially complete five column, seven row array 6 is shown in Figure 2. While it is usually the case that the microprocessor has already determined the type and location of the symbols within the array at the commencement of the game, the present invention divides the array into groups containing one or more symbols. Figure 1 shows four groups of symbols 1, 2, 3 and 4 that are positioned in the array 6 shown in Figure 2. The symbols within each group may be the same or different and may also include wildcard symbols 5 which can be used to substitute for any of the other available symbols. In the present embodiment, the groups 1, 2, 3 and 4 are formed on the screen above the incomplete array 6 and then dropped down into their predetermined position. The groups 1, 2, 3 and 4 are formed and positioned in the array 6 in sequence until the array is complete. Upon completion, winnings are awarded to the player for any winning combinations appearing on any of the paylines (not shown) carrying a bet.

In one embodiment, the number and configuration of the groups is randomly selected and the sequence with which they are positioned in the array may also be random. This allows the player to observe the incremental build up of the array and watch the groups move into position within the array and possibly form a winning combination. This serves to heighten the sense of anticipation and excitement experienced by the player.

As an additional feature, the machine is suitably programmed to arbitrarily choose a point during the completion of the array where it simply fills in any vacant positions with wildcards. Figure 3 shows a portion of the array 6 of Figure 2. Symbol groups 1 and 4 combine such that there is a single vacant array position 7 in this portion of the array 6. Using this feature, any

single positions 7 left vacant in the array after the groups are positioned can be given wildcards. In reality, the machine will have already predetermined which positions are to be occupied by wildcards at the commencement of the game. However, by only revealing all of them to the player as the final step in completing the array will heighten the player's anticipation.

As shown in Figure 4, another feature of the game may be groups 20 of symbols that consist entirely of wildcards. As wildcards can substitute for any other symbols, a group of wildcards appearing together in an array is likely to form part of many of the available paylines. This can be very beneficial for the player, especially if the player bets on all available paylines. To further raise volatility of the game, in some embodiments, the wildcards are assigned multiplying factors greater than one, whereby the usual winnings associated with any winning combinations containing the wildcard will be multiplied by the multiplying factor. This provides a strong incentive for the player to bet on all paylines, which in turn makes the machine more profitable.

Another feature made possible by the present invention is shown in Figure 5. Positions within the vacant array 30 are suitably designated as having associated bonuses as shown by 31-35. If a winning combination includes a symbol on one of the designated positions, which also happens to be on a payline carrying a bet, the player receives the bonus associated with the designated position. As shown, the bonus is suitably a multiplying factor to double or triple the usual winnings, or simply additional credits or free games.

To add to the visual appeal, in some embodiments, the symbols are shown on simulated three dimensional objects which are then positioned on the vacant sites within the array. In other embodiments, rectangular prisms with symbols shown on each face are conveniently rotated and assembled into the desired groups and then moved into position within the array.

By departing from the long standing traditional method of forming the array, the present invention provides a gaming machine having numerous additional features to enhance a player's interest and enjoyment.

The invention has been described herein by way of example only. It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive. Other features and aspects of this invention will be appreciated by those skilled in the art upon reading and comprehending this disclosure. Such features, aspects, and expected variations and modifications of the reported results and examples are clearly within the scope of the invention where the invention is limited solely by the scope of the following claims.